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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,044	05/09/2005	Tiziano Ambrosini	05999.0011-00	3165

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EXAMINER	
MCMAHON, MARGUERITE J	

ART UNIT	PAPER NUMBER
3741	

MAIL DATE	DELIVERY MODE
11/23/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/509,044	AMBROSINI ET AL.	
	Examiner	Art Unit	
	Marguerite J. McMahon	3741	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 39-76 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 39-76 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 9/27/04.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Group I in the reply filed on 7/20/09 is acknowledged. The traversal is on the ground(s) that the subject matter of the claims found in Group II is also found in Group I. This is found to be persuasive, and the restriction requirement is waived.

Applicant is requested to send in a copy of the search report alluded to in the preliminary examination report for PCT/EP02/03534.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 39, 43, 44, 47-49, 51-59, 63, 64, 66-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffer et al (De 100 03 105). Note a method for reducing emission of pollutants from an internal combustion engine including at least one combustion chamber, injecting a fuel emulsion comprising a liquid hydrocarbon fuel, water, at least one emulsifier comprising a polyalkoxylated polyisobutene whose HLB value is between 2 and 6, and at least one oxygen-containing water soluble organic compound into the combustion chamber, igniting the fuel emulsion in the at least one combustion chamber in the presence of air, and operating the engine so as to reduce peak combustion temperature in the at least one combustion chamber. See

example 4 which discloses an emulsion that contains 15 wt% of water of 5 wt% of methanol. Huffer et al does not show the exact same ranges for the water and emulsifier as that claimed by Applicant, but the ranges overlap and are close enough to provide a prima facie case of obviousness.

Claims 39, 43, 44, 47-49, 51-54, 57-59, 63, 64, 66-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ford (3,756,794). Note a method for reducing emission of pollutants from an internal combustion engine including at least one combustion chamber, injecting a fuel emulsion comprising a liquid hydrocarbon fuel, water, at least one emulsifier, and at least one oxygen-containing water soluble organic compound into the combustion chamber, igniting the fuel emulsion in the at least one combustion chamber in the presence of air, and operating the engine. Ford does not show the exact same ranges for the water and emulsifier as that claimed by Applicant, but the ranges overlap and are close enough to provide a prima facie case of obviousness.

Claims 59-69, 72, and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by Genova et al (EP-A-0 399 620). Note a method for reducing emission of pollutants from an internal combustion engine including at least one combustion chamber, injecting a fuel emulsion comprising a liquid hydrocarbon fuel, water, at least one emulsifier, and at least one oxygen-containing water soluble organic compound into the combustion chamber, igniting the fuel emulsion in the at least one combustion chamber in the presence of air, and operating the engine so as to reduce peak combustion temperature in the at least one combustion chamber. Genova et al does

not show the exact same ranges for the water and emulsifier as that claimed by Applicant, but the ranges overlap and are close enough to provide a prima facie case of obviousness.

Claims 59-69, 72, and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by Schon et al (5,004,479). Note a method for reducing emission of pollutants from an internal combustion engine including at least one combustion chamber, injecting a fuel emulsion comprising a liquid hydrocarbon fuel, water, at least one emulsifier, and at least one oxygen-containing water soluble organic compound into the combustion chamber, igniting the fuel emulsion in the at least one combustion chamber in the presence of air, and operating the engine so as to reduce peak combustion temperature in the at least one combustion chamber. Schon et al does not show the exact same ranges for the water and emulsifier as that claimed by Applicant, but the ranges overlap and are close enough to provide a prima facie case of obviousness.

Claims 59-64, 66, 69, 72, and 73 are rejected under 35 U.S.C. 102(b) as being anticipated by Genova et al (EP-A-0 441 002). Note a method for reducing emission of pollutants from an internal combustion engine including at least one combustion chamber, injecting a fuel emulsion comprising a liquid hydrocarbon fuel, water, at least one emulsifier, and at least one oxygen-containing water soluble organic compound into the combustion chamber, igniting the fuel emulsion in the at least one combustion chamber in the presence of air, and operating the engine so as to reduce peak combustion temperature in the at least one combustion chamber. Genova et al does

not show the exact same ranges for the water and emulsifier as that claimed by Applicant, but the ranges overlap and are close enough to provide a prima facie case of obviousness.

Claims 40-42, 45, 46, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huffer et al (De 100 03 105) in view of Beck et al (6,598,584). Huffer et al shows everything except the specific ranges for water and emulsifier and employing EGR, controlling injection timing, and compressing and cooling intake air. It has been noted in the above rejection that the ranges shown by Huffer et al overlap and are close enough to provide a prima facie case of obviousness. Beck et al teach that it is old in the art to employ EGR, controlling injection timing, and compressing and cooling intake air. It would have been obvious to one having ordinary skill in the art to modify Huffer et al by employing EGR, controlling injection timing, and compressing and cooling intake air, in order to reduce peak combustion temperature. Note that these features are also acknowledged by Applicant in the specification to be conventional.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marguerite J. McMahon whose telephone number is 571-272-4848. The examiner can normally be reached on Monday- Friday, 10am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cuff can be reached on 571-272-6778. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Marguerite McMahon
Primary Examiner
Art Unit 3741

/Marguerite McMahon/
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